

REMARKS

Applicants appreciate the Examiner's thorough examination of the present application as evidenced by the Office Action of September 8, 2003 (hereinafter "Office Action"). In response, Applicants have amended independent Claim 10 to clarify that the isolation layer covers a first sidewall portion of the trench, an entire bottom of the trench, and exposes a second sidewall portion of the trench. Applicants respectfully submit, therefore, that Claims 10 - 13 are patentable based on the Examiner's statement of reasons for allowance.

Applicants respectfully submit that the cited reference fails to disclose or suggest all of the recitations of independent Claim 40. Therefore, Applicants respectfully submit that all pending claims are in condition for allowance. Favorable reconsideration of all pending claims is respectfully requested for at least the reasons discussed hereafter.

Independent Claim 10 is Patentable

Claims 10 stands rejected under 35 U.S.C. §102(b) as being anticipated by U. S. Patent No. 5,886,382 to Witek (hereinafter "Witek"). Independent Claim 10 is directed to a method of manufacturing an integrated circuit device in which a trench is formed in a substrate and an isolation layer is formed in the trench. In particular, forming the isolation layer is described as follows:

forming an isolation layer comprising an insulating material in the trench so as to cover a first sidewall portion of the trench and an entire bottom of the trench and to expose a second sidewall portion of the trench;

...

The Office Action in the section entitled "Allowable Subject Matter" states that the prior art does not disclose or suggest "...filling an entire bottom of the trench with an insulating material so as to cover a first portion of the sidewall and to expose a second portion of the sidewall..." In view of this acknowledgement, Applicants respectfully submit that independent Claim 10 is patentable over Witek, and that dependent Claims 11 - 13 are patentable at least as they depend from an allowable claim.

Independent Claim 40 is Patentable

Claims 40 stands rejected under 35 U.S.C. §102(b) as being anticipated by Witek. Independent Claim 40 is directed to a method of manufacturing an integrated circuit device in which a gate electrode is formed on a mesa structure. In particular, forming the gate electrode is described as follows:

forming a gate electrode on the mesa structure that extends across the top surface and down respective upper portions of the sidewalls.

The Office Action cites the conductive spacer 50a shown in FIG. 15 as corresponding to the gate electrode recited in Claim 40. Applicant submits, however, that the conductive spacer 50a is disposed only on sidewall portions of the mesas adjacent the trench 37 in FIG. 15. In sharp contrast with the recitations of Claim 40, the spacer 50a does not extend across a top surface of either of the two mesas shown adjacent to the trench 37.

Accordingly, for at least the foregoing reasons, Applicants respectfully submit that independent Claim 40 is patentable and that dependent Claims 41 - 45 are patentable at least as they depend from an allowable claim.

CONCLUSION

In light of the above amendments and remarks, Applicants respectfully submit that the above-entitled application is now in condition for allowance. Favorable reconsideration of this application, as amended, is respectfully requested. If, in the opinion of the Examiner, a telephonic conference would expedite the examination of this matter, the Examiner is invited to call the undersigned attorney at (919) 854-1400.

It is not believed that an extension of time and/or additional fee(s)-including fees for net addition of claims-are required, beyond those that may otherwise be provided for in documents accompanying this paper. In the event, however, that an extension of time is necessary to allow consideration of this paper, such an extension is hereby petitioned under 37 C.F.R. §1.136(a). Any additional fees believed to be due in connection with this paper are hereby authorized to be charged to our Deposit Account No. 50-0220.

Respectfully submitted,



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CERTIFICATE OF MAILING

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to Mail Stop Non-Fee Amendment, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on December 5, 2003.



Traci A. Brown